

ATALANTA B

Schistostege forsteri n. sp. from Hungary

(Lep. Geometridae)

by

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Summary. — The Hungarian population recorded as a form of *Schistostege decussata* DEN. et SCHIFF. represents a distinct species. The name „fortificata Tr.“ used in literature is a nomen nudum; the taxon herein described as *Schistostege forsteri* n. sp. inhabits the environs of Budapest and the Great Plains. The imagos are brown, and the shape of the male and female genital apparatuses differs sharply from that of *decussata* DEN. et SCHIFF. The type locality of *Schistostege decussata* DENIS & SCHIFFERMÜLLER, 1776 is unknown; the species was not described according to the material present in the collection of the authors. In all probability the topotypical specimens did not descend from the neighbourhood of Vienna. The species has numerous named forms, recorded as aberrations, varieties or subspecies. The Hungarian *Schistostege* population, known since TREITSCHKE's time (1828) as „fortificata Tr.“, was also ranked with these; its main feature is the brown colour of the imagos. According to PROUT (1915), writing also of „ab. fortificata Tr.“, we are dealing with a form of *decussata* frequent in Hungary, a form which has completely pushed the nominate form into the background around Budapest. The nominate form itself flies in the wet meadows of SE Europe. Later on PROUT (1937) recorded, besides a number of localities in the Balkan, its occurrence also in France. He listed the Hungarian „form“ as „fortificata Tr.“, and relegated to it not only the form occurring around Vienna, but also that living in the Pyrenees (near Lugagnan.).

TREITSCHKE (1828), in fact, mentioned the name fortificata („Die lederfarbige Abänderung hieß einst Fortificata“), but this statement cannot be considered a valid description, and is to be handled as a nomen nudum. According to TREITSCHKE, the various forms occur mixed together; though he mentioned „fortificata“ from Hungary („Ungarn“), this territory may at that time have included however some regions belonging now into Yugoslavia in the south and / or into Rumania in the south-east — and the more so as he regarded our home specimens as showing a strong pattern

which does not hold good for those occurring in Hungary within its present frontiers, but for individuals representing the Rumanian populations.

Accordingly, I made a thorough study of the Hungarian population; it has been found to differ on the specific level from *Schistostege decussata* DEN. et SCHIFF., so that it has to be described and named as a new species:

Schistostege forsteri n. sp. (Fig. 1, B, D and F).

Measurements

The mean difference between the sexes is slight, but the alar expanse of certain individuals may be considerably different. The mean expanse of the forewings of the males (based on 151 specimens) is 32 mm and of the females 30 mm; the extreme values are 25 and 35 mm.

Shape, colour and pattern

The wings are elongated, especially the hind ones whose length reaches or exceeds that of the forewings. Forewing: the costa is convex at the base, then straight, medially hardly discernibly concave, and then again convexly arcuate. The apex is slightly elongated. The termen is strikingly arcuate, the tornus widely rounded. Hindwing: the costa is extremely long, arcuate and subtending with the termen a projecting apex. The termen and the tornus are hardly curved. The head and the thorax are small as compared with the wings, whereas the abdomen is very long and thin. The basic colour of the forewings is coriaceous brown, with differences between the specimens not so much in the hue (lighter or darker brown) as in the extension of the whitish pattern. In "lighter" individuals the brown colour is restricted to the veins and their vicinity, to the double transverse band and the marginal field. Specimens like these rarely occur among the males, but are rather numerous among the females. In many cases only the median stripe in the double transverse band is white, and frequently this, too, becomes obsolescent. The underside is similar to the upperside, but rather more contrastful: the brown colour is darker, the whitish hue purer. The body of the imago, indeed, also the antennae are — contrary to literature — concolourous with the basic hue of the wings.

Genital apparatus:

Males: Uncus long, rather wide, robust. Vinculum pointed. Valvae short, squat, obtusely rounded, their costa heavily sclerotized: the evolved sclerotized margin widening distally. Aedoeagus thin and longer than the valva. — Females: Bursa copulatrix small, rather cylindrical, extremely heavily sclerotized. Tergite VIII with two definite and striking, dentiform projections on its anterior margin. Papillae anales large, wide, with a sinuous margin.

Phenology:

The majority of the imagos were collected in June, in the first half and the

middle of the month, but there are many specimens captured also in May. Specimens of July are sporadic.

Range

All examined specimens originated from Central Hungary, more precisely from the environs of Budapest and the Plains between the Danube and the Tisza. According to literature data, the species occurs also around Vienna and in the Pyrenees (?). Locus typicus: Budapest. The home localities are partly hot and dry sandy regions partly also warm, low hilly slopes with karstic shrub or steppe vegetations on dolomite or limestone substrates. In view of the fact that literature cites *Sch. decussata* DEN. et SCHIFF. from wet meadows, the ecological requirements of the two species are presumably also widely different.

Stages of development and foodplants are unknown.

I dedicate the new species to DR. W. FORSTER, Director of the Zoologische Sammlung des Bayerischen Staates München, who called my attention to the „decussata problem.“

Holotype ♂: Budapest, Farkasv. ölg, 1931 V. 21. leg. UHRIK.

Paratypes ♂♂: 2, Budapest, 1922. V. 6. leg. KOVÁCS; 1, Budapest, 1922. VI. 21. leg. KOVÁCS; 3, Budapest, 1923. V. 31. leg. KOVÁCS; 4, Budapest, 1928. VI. 14. leg. KOVÁCS; 2, Budapest, 1929. VI. 13. leg. KOVÁCS; 1, Budapest, 1932. V. 22. leg. KOVÁCS; 2, Budapest, 1932. VI. 12. leg. KOVÁCS; 1, Budapest, 1942. VI. 17. leg. KOVÁCS; 1, Budapest, 1943. VI. 19. leg. KOVÁCS; 1, Budapest, 1946. V. 11. leg. KOVÁCS; 1, Budapest, 1947. VI. 5. leg. KOVÁCS; 2, Budapest, 1941. VI. 15. leg. VIDA; 1, Budapest, 1943. V. 13. leg. FFRIEDRICH; 1, Budapest, 1948. V. 14. leg. FRIEDRICH; 4, Budapest, 1932. VI. leg. MAJTHÉNYI; 1, Budapest, 1900. VI. 17. leg. SZEDLACSEK; 1, Budapest, 1913. VI. 15. leg. JABLONKAY; 1, Budapest, leg. UHRIK; 1, Budapest, leg. ULBRICH; 2, Budapest, leg. PÁVEL; 1, Budapest, 1899. VI. 8. leg. AIGNER; 1, Budapest, VI. 14. leg. KERTÉSZ; 1, Budapest, VI. 15. leg. KERTÉSZ; 1, Budapest, 1928. VI. 14. leg. KOVÁTS; 1, Budapest; 1, coll. TOMALA; 1, Budapest, Svábhegy, 1942. VI. 10. leg. LEVATICH; 1, Budapest, Svábhegy, 1942. VI. 12. leg. LEVATICH; 1, Budapest, Svábhegy, 1946. VI. 26. leg. LEVATICH; 1, Budapest, Svábhegy, 1942. VI. 19. leg. VARGHA; 1, Budapest, Svábhegy, 1914. VI. 5. leg. UJHELYI; 1, Budapest, Svábhegy, 1911. VI. 18. leg. RIEDL; 1, Budapest, Irhásárok, 1939. V. 28. leg. LEVATICH; 2, Irhásárok, 1936. VI. 8. leg. LENGYEL; 1, Budapest, Jánoshegy, 1939. VI. 9. leg. FABRICIUS; 1, Budapest, Hűvösvölgy, 1941. VI. 17. leg. FABRICIUS; 1, Budapest, Szechenyihegy, 1943. V. 29. leg. GERGELY; 1, Budapest, Ferkasvölgy, 1934. V. 21. leg. UHRIK; 3, Budapest, Hármashatárhegy, 1953. VI. 14. leg. KOVÁCS I., 1, Budapest, Hármashatárhegy, 1925. VI. 20. leg. MIHÁLYI; 1, Budapest, Hármashatárhegy, 1952. VI. 15. leg. LENGYEL; 2, Budapest, Hármashatárhegy, 1953. VI. 14. leg. JABLONKAY; 1, Budapest, Csillebérc, 1942. VI. 14. leg. LEVATICH; 4,

Budaörs, Csiki-hegyek, 1939. VI. 7. leg. UHRIK; 1, Budaörs, Csiki-hegyek, 1939. VI. 15. leg. UHRIK; 3, Budaörs, Csiki-hegyek, 1939. VI. 17. leg. UHRIK; 2, Budaörs, Csiki-hegyek, 1939. VI. 19. leg. UHRIK; 3, Budaörs, Csiki-hegyek, 1949. VI. 5. leg. FABRICIUS; 1, Budaörs, Csiki-hegyek, 1941. VII. 6. leg. FABRICIUS; 1, Budaörs, Csiki-hegyek, 1945. VI. 3. leg. ISSEKUTZ; 1, Budaörs, Csiki-hegyek, 1950. VI. 15. leg. GERGELY; 1, Csiki-hegyek, 1943. VI. 14. leg. VARGHA; 1, Csiki-hegyek, 1939. VI. 4. leg. VARGHA; 1, Budaörs, 1943. V. 30. leg. VIDA; 1, Törökbálint, 1912. leg. JABLONKAY; 1, Máraiabesnyő, 1942. VI. 12. leg. SZURDOKY; 1, Pusztapeszér, 1924. VI. 8. leg. UHRIK; 1, Peszér, leg. SCHMIDT; 1, Peszér, 1930. VI. 13. leg. SCHMIDT; 1, Pusztapeszér, 1924. VI. 8. leg. SCHMIDT; 1, Peszér, 1924. VI. 8. leg. ISSEKUTZ; 1, Isaszeg, 1925. V. 3. leg. SZURDOKY.

Paratypes ♀♀: 1, Budapest, 1922. VI. 22. leg. KOVÁCS; 1, Budapest, 1927 VI. 12. leg. KOVÁCS; 3, Budapest, 1928. VI. 14. leg. KOVÁCS; 1, Budapest, 1929. VI. 13. leg. KOVÁCS; 2, Budapest, 1933. VI. 11. leg. KOVÁCS; 4, Budapest, 1933. VI. 12. leg. KOVÁCS; 2, Budapest, 1947 VI. 5. leg. KOVÁCS; 1, Budapest, 1913. VI. 15. leg. JABLONKAY; 1, Budapest, 1952. V. 27. leg. JABLONKAY; 1, Budapest, VI. 14. leg. KERTÉSZ; 1, Budapest, VI. 15. leg. KERTÉSZ; 2, Budapest, 1900. VI. 17. leg. SZEDLACSEK; 3, Budapest, Hármashatárhegy, 1952. VI. 15. leg. LENGYEL; 1, Budapest, Hármashatárhegy, 1953. VI. 14. leg. JABLONKAY; 3, Budapest, Hármashatárhegy, 1952. VI. 15. leg. KOVÁCS I.; 1, Budapest, Hármashatárhegy, 1937 VI. 6. leg. LEVATICH; 1, Budapest, Irhásárok, 1939. V. 28. leg. LEVATICH; 1, Budapest, Svábhegy, 1946. V. 26. leg. FABRICIUS; 1, Budapest, Farkasvölgy, 1926. VI. 4. leg. UHRIK; 1, Budapest, Farkasvölgy, 1934. V. 21. leg. UHRIK; 1, Budapest, Irhásárok, 1936. VI. 16. leg. LENGYEL; 1, Budapest, Svábhegy, 1947. V. 31. leg. FABRICIUS; 1, Budapest, Hűvösvölgy, 1931. V. 14. leg. UHRIK; 1, Kecskéhegy, 1932. VI. 21. leg. UHRIK; 1, Budapest; 1, Budaörs, Csiki-hegyek, 1934. V. 31. leg. UHRIK; 1, Budaörs, Csiki-hegyek, 1935. VI. 14. leg. UHRIK; 1, Budaörs, Csiki-hegyek, 1937 VI. 8. leg. UHRIK; 3, Budaörs, Csiki-hegyek, 1939. VI. 15. leg. UHRIK; 1, Budaörs, Csiki-hegyek, 1939. VI. 17. leg. UHRIK; 2, Budaörs, Csiki-hegyek, 1939. VI. 19. leg. UHRIK; 1, Budaörs, Csiki-hegyek, 1949. VI. 10. leg. GERGELY; 1, Budaörs, Csiki-hegyek, 1941. VII. 6. leg. FABRICIUS; 1, Budaörs, Csiki-hegyek, 1945. VI. 3. leg. FABRICIUS; 1, Budaörs, 1943. VI. 19. leg. KOVÁCS; 1, Pusztapeszér, 1921. VI. 14. leg. UHRIK; 3, Pusztapeszér, 1924. VI. 8. leg. UHRIK; 1, Pusztapeszér, 1924. VI. 8. leg. FRIEDRICH; 1, Felsőpeszér, 1924. VI. 9. leg. PARLAY; 1, Felsőpeszér, 1924. VI. 10. leg. PARLAY; 1, Felsőpeszér, 1924. VI. 8. leg. FRIEDRICH; 1, Felsőpeszér, 1925. VI. 10. leg. SZURDOKY; 1, Peszér, 1905. VI. 5. leg. SCHMIDT; 1, Peszér, 1930., VI. 13. leg. SCHMIDT; 1, Isaszeg, 1925. V. 29. leg. SZURDOKY; 1, Isaszeg, 1925. VI. 30. leg. SZURDOKY; 1, Szada, leg. SCHMIDT.

Slides: *Sch. decussata* DEN. et SCHIFF.: No. 986, 987, 989, 992, 993, prep. L. GOZMÁNY and No. 10.050, 10.051, prep. A. VOJNITS; *Sch. forsteri* n.

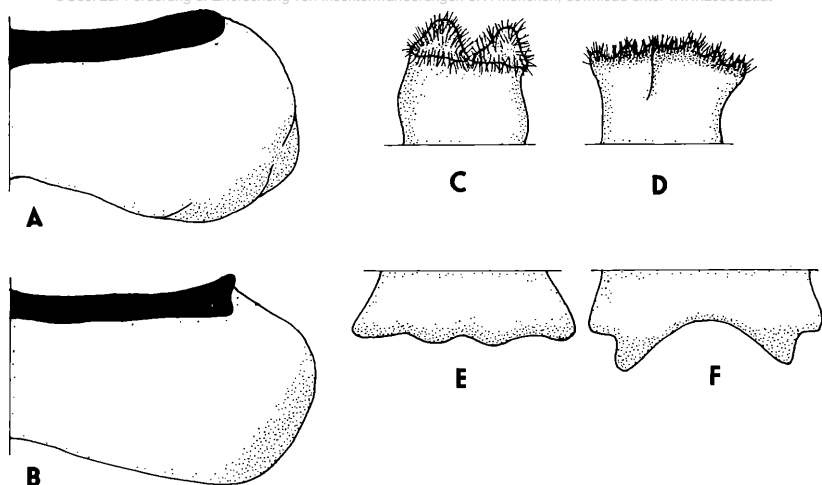


Fig. 1: *Schistostege decussata* DEN. et SCHIFF. and *Sch. forsteri* n. sp.: ♂ valva (A, B), papillae anales of ♀ (C, D), anterior margin of tergite VIII (E, F). Slides: No. 10.048, 10.049, 10.050 and 10.051, prep. A. VOJNITS

sp.: No. 10.048, 10.049, 10.054, 10.055, 10.056, 10.057, 10.058, 10.059, 10.060, prep. A. VOJNITS.

Holotype and paratypes deposited in the Zoological Department of the Hungarian Natural History Museum, Budapest.

Specific differences

In the following tabulation, the several subspecies and forms of *Sch. decussata* DEN. et SCHIFF. are disregarded, and only those features stressed by which the new species can unequivocally be separated from the entire decussatagroup.

	<i>Sch. forsteri</i> n. sp.	<i>Sch. decussata</i> DEN. et SCHIFF.
Colour of wings	darker or lighter coriaceous brown	grey, black, brownish grey or yellowish grey
Heavily sclerotized costa of valvae (♂♂)	widening towards apex	obtusely rounded
Papillae anales (♀♀)	large, wide, margins sinuous	comparatively small, triangular or grain-shaped
Anterior margin of tergite VIII (♀♀)	with two symmetrical, conspicuously projecting apices or teeth	irregularly sinuous

It is my agreeable duty to express my gratitude to the Humboldt Foundation, Bonn-Bad Godesberg, to Prof. DR. F. SAUER, Director, and to DR. U. ROESLER, keeper (at that time) of Lepidoptera of the A. Koenig Museum, Bonn, for having made possible and supporting my researches in Germany; the study of the comparative material preserved in the A. Koenig Museum had been exceedingly useful for the solution of the present problem.

Zusammenfassung: Der Verfasser stellt fest, daß die in Mittelungarn (zwischen Donau und Theiß und in der Umgebung von Budapest) verbreitete *Schistostege*-Population nicht mit der von *Sch. decussata* DEN. et SCHIFF. übereinstimmt. Die ungarischen Exemplare weisen eine braune Färbung auf, während die Grundfarbe von *decussata* grau ist bzw. verschiedene Abstufungen von schwarzer Färbung zeigt. Bedeutend sind auch die Unterschiede im Aufbau der Genitalorgane, vorwiegend hinsichtlich der ♀♀. Die ungarische Population wurde in der Literatur durchwegs als „ab. fortificata Tr.“ behandelt. Dieser Name ist als nomen nudum unbrauchbar; der Verfasser benennt diese Art als *Schistostege forsteri* n. sp.

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- TREITSCHKE, F. (1828): Die Schmetterlinge von Europa. — p. 261—262, Leipzig.

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